REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 01.02.2023

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0340 UTC OF 01.02.2023 BASED ON 0000 UTC OF 01.02.2023.

SUB: DEPRESSION OVER SOUTHWEST BAY OF BENGAL

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARDS WITH A SPEED OF 07 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0000 UTC OF TODAY, THE 1ST FEBRUARY, 2023 OVER THE SAME REGION NEAR LATITUDE 8.2°N AND LONGITUDE 82.6°E, 110 KM EAST-SOUTHEAST OF BATTICALOA (SRI LANKA, 43436), 160 KM EAST-EASTSOUTHEAST OF TRINCOMALEE (SRI LANKA, 43418), AND 420 KM SOUTHEAST OF KARAIKAL (INDIA, 43346).

IT IS VERY LIKELY TO MOVE WEST-SOUTHWESTWARDS AND CROSS SRI LANKA COAST BETWEEN LATITUDE 7°N TO 8°N DURING 0900-1200 UTC OF 01ST FEBRUARY 2023.

FORECAST TRACK AND INTENSITY ARE GIVEN BELOW:

DATE/TIME(UTC)	POSITION LAT. ^{0}N/ LONG. ^{0}E	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
01.02.23/0000	8.2/82.6	45-55 GUSTING TO 65	DEPRESSION
01.02.23/1200	7.4/81.6	45-55 GUSTING TO 65	DEPRESSION
02.02.23/0000	6.5/80.7	40-50 GUSTING TO 60	DEPRESSION

INTENSITY OF THE SYSTEM IS CHARACTERIZED AS T 1.5. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL BETWEEN LATITUDE 8.^{0}N TO 13.0^{0}N LONG 80.0^{0}E TO 85.5^{0}E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93^{0}C.
ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1004 HPA. SEA CONDITION IS ROUGH TO VERY ROUGH OVER SOUTHWEST BOB.

REMARKS:

THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE AROUND 2. IT WILL CONTINUE IN SAME PHASE WITH SIMILAR INCREASED AMPLITUDE DURING NEXT 7 DAYS. MJO INDEX IS THUS CONDUCIVE FOR ENHANCEMENT OF CONVECTIVE ACTIVITY OVER BAY OF BENGAL (BOB) AND MAINTENANCE OF INTENSITY OF THE SYSTEM. THE CFS BASED FORECAST FOR EQUATORIAL WAVES INDICATE STRONG EASTERLY WINDS (5-7 MPS) OVER SOUTH BOB, STRONG WESTERLY WINDS (5-7 MPS)

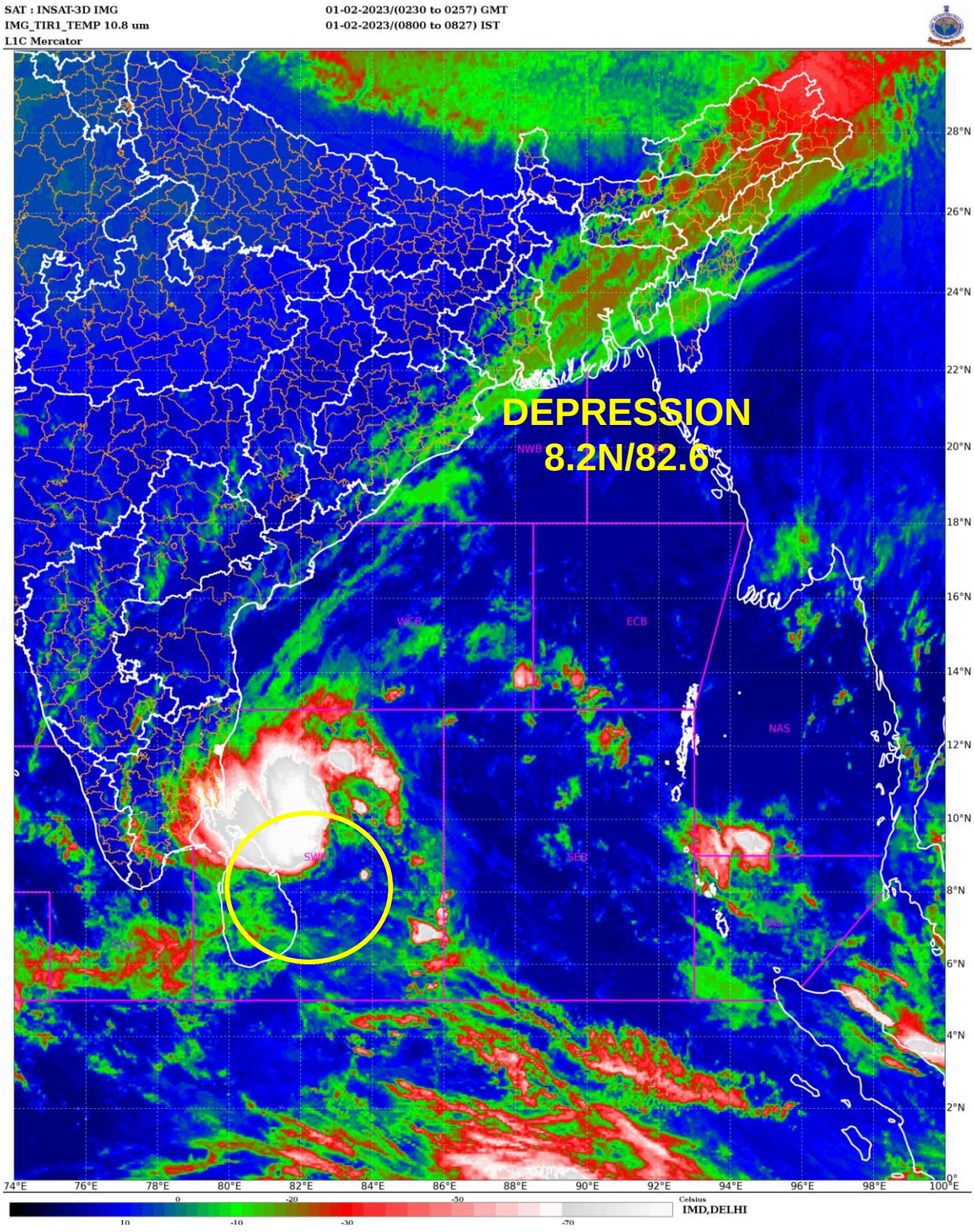
OVER EQUATORIAL INDIAN OCEAN (EIO) AND ADJOINING SOUTH BOB ALONGWITH KELVIN WAVES, MJO AND EQUATORIAL ROSSBY WAVES OVER EIO AND ADJOINING SOUTH BOB ON 31ST JANURAY. ALL THESE EQUATORIAL WAVES ARE CONTRIBUTING TOWARDS MAINTENANCE OF INTENSITY OF THE SYSTEM.

SEA SURFACE TEMPERATURE (SST) IS AROUND 27-28°C OVER SOUTH BOB AND ADJOINING EQUATORIAL INDIAN OCEAN (EIO). TOTAL PRECIPITABLE WATER IMAGERY INDICATES WARM MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. LOW LEVEL VORTICITY OF 100 X10-6 S^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. LOW LEVEL CONVERGENCE IS 10 $X10^{-5}$ S^{-1} AROUND THE SYSTEM CENTER. UPPER LEVEL DIVERGENCE IS 10 $X10^{-5}$ S^{-1} TO THE WEST-SOUTHWEST OF THE SYSTEM CENTER. WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE OVER SOUTHWEST BAY OF BENGAL, INCREASING ALONG ITS TRACK TO 20-30 KNOTS . THE UPPER TROPOSPHERIC RIDGE IS SEEN ALONG 15.0°N OVER THE BOB. AS THE VERTICAL EXTENT OF THE SYSTEM DECREASED DUE TO WEAKNING OF THE SYSTERM AS SHOWN IN THE DYNAMICAL PARAMETERS, THE SYSTEM WOULD BE STEERED BY THE LOWER-MID LEVEL MEAN NORTHEASTERLY WINDS. THEREFORE THE SYSTEM VERY LIKELY TO MOVE WEST-SOUTHWESTWARD TOWARDS SRI LANKA COAST. AS THE SYSTEM WOULD REACH NEAR COAST, DRY COLD AIR WOULD INTRUDE INTO THE SYSTEM AREA FROM SOUTH AND EASTERLY WIND SHEAR WOULD LEAD TO WEAKENING OF THE SYSTEM.

MOST OF THE MODELS INCLUDING IMD GFS, NCUM AND ECMWF ARE INDICATING THE WEST-SOUTHWESTWARDS TOWARDS SRI LANKA COAST AND CROSSING BETWEEN 7.5°N-8.5°N DURING 0900-1200 UTC OF 1ST FEBRUARY.

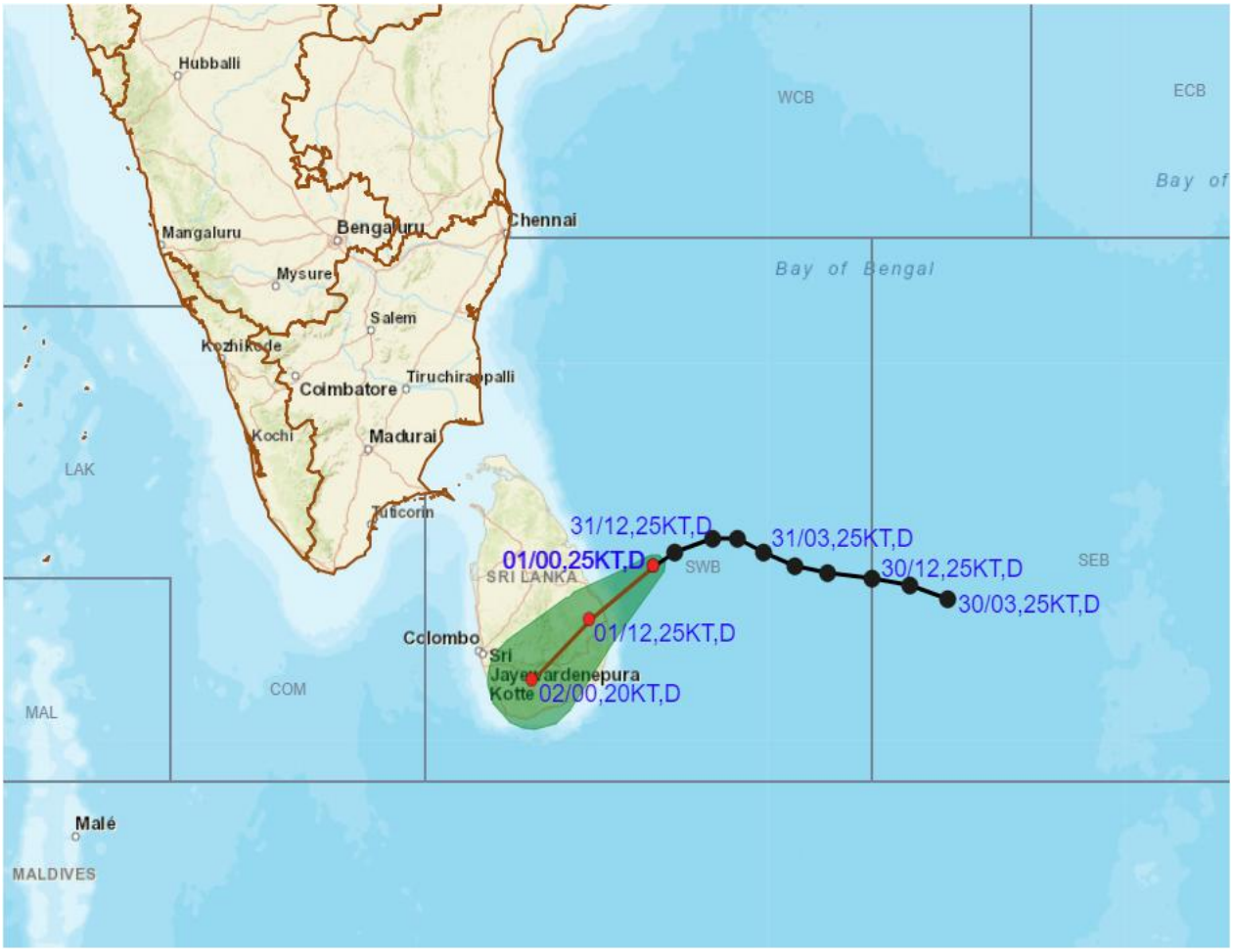
IN VIEW OF ALL THE ABOVE, THE DEPRESSION OVER SOUTHWEST BOB IS VERY LIKELY TO MOVE WEST-SOUTHWESTWARDS AND CROSS SRI LANKA COAST BETWEEN LATITUDE 7°N TO 8°N BETWEEN 0900-1200 UTC OF 01ST FEBRUARY 2023.

(ARULALAN T)
SCIENTIST-C
RSMC, NEW DELHI



Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

OBSERVED AND FORECAST TRACK OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC OF 01st FEBRUARY, 2023.



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY

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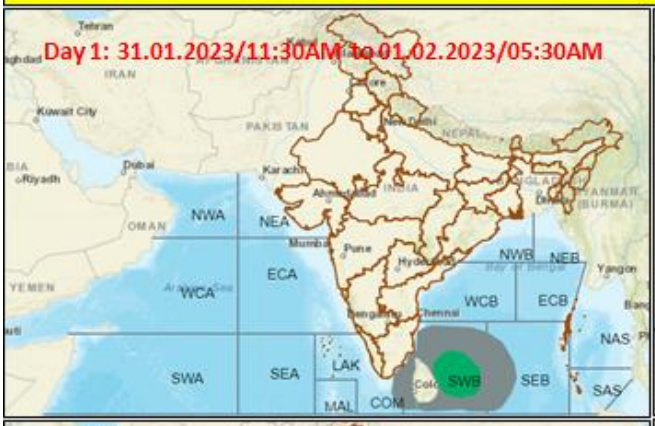
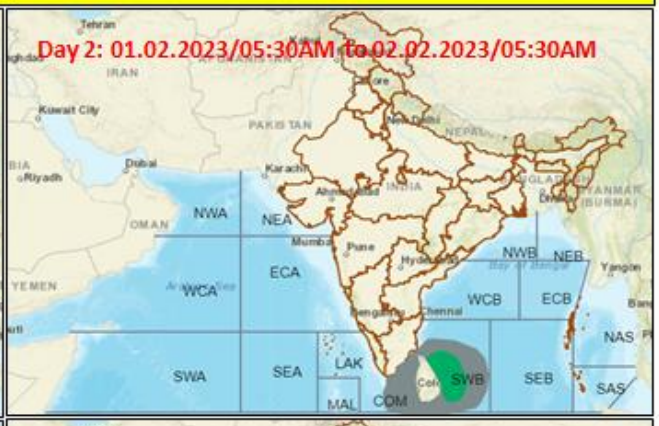
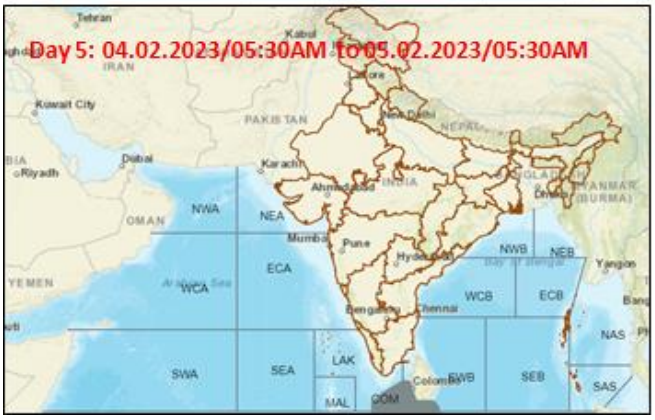
Fishermen warning graphics







Squally WX with wind speed 40-45 kmph gusting to 55 kmph

Squally wind speed 45-55 kmph gusting to 65 kmph

Fishermen are advised not to venture into the marked areas.

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